

REMARKS

Claims 1-27, all the claims pending in the application, are rejected. Claims 1, 2, 4, 5 and 24-26 are amended. Claims 3, 16, 23 and 27 are cancelled.

Interview

As a preliminary matter, Applicants wish to express their appreciation for the courtesy extended by the Examiner to the Applicants' representative during a telephone interview on February 7, 2011.

During the interview, the Examiner kindly acknowledged that the application does disclose inventive subject matter, but expressed concern that the claims are broadly directed to a glass that could be used in numerous applications, such as optical fiber or the like. The Examiner reiterated the suggestion made in the Office Action that the claims be limited to a structure, such as a disk that is made of glass. In addition, the Examiner acknowledged that the features of the disk with respect to bending and strength were important and noted that the particular combination of materials in the glass provided such features. The Examiner suggested that the ranges of materials recited in the claims should be those most suitable for achieving those features and suggested that the ranges in the table of paragraph [0054] might be the most appropriate. Thus, the claim would recite a basis for the acknowledged superior physical properties, surface character and strength for a range of glass components that has been claimed.

The Examiner also noted that the subject matter of claims 24-26 recited a Young's modulus and ratio's that were not found in the prior art. Applicants believe that this observation underlies the absence of any rejection of these claims.

Applicants' representative expressed appreciation for the suggestions and advised that Applicants would consider the comments in preparing the amendment.

The Examiner agreed to call the Applicants representative with proposed added amendments, if needed, so that prosecution could be quickly concluded.

Election - Restriction of Invention and Rejoinder

The Examiner reiterated that the claims under consideration remain the previously elected Group II substrate invention - claims 5-15 and 17-22 with independent claim 1 - as a linking claim only. Since the independent claim 1 has been amended to focus on a substrate structure, the withdrawn claims 2 and 4 have been amended to relate to that structure as well and now should be rejoined.

The remaining withdrawn claims are cancelled.

Objections

Linking claim 1 and claims 5-15 and 17-22 are objected to because of the informalities in many chemical formulas of claim 1 where a zero (0) appears for the letter O.

Appropriate amendment has been made for the compound Al₂O₃; Na₂O; K₂O; ZrO₂ and Ti₂O so that the oxygen notation "0" is now typed as the letter 'O'.

Claim Rejections - 35 U.S.C. § 103

Claims 1 (as linking claim), 5, 11-14 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto et al (US 6332338) and Hayashi et al (US 5900296) taken with Maeda et al (US 6297182), for reasons of record. This rejection is traversed for at least the following reasons.

Amended Claim 1

Applicants now have amended claim 1 so that it is directed to a substrate of an information recording medium comprising a disk that is "adapted to receive on a surface thereof plural layers including a recording layer and comprising a glass suitable for chemical reinforcement," where the glass has a specified composition, as disclosed in paragraph 0054 of the published application, that achieves highly desirable bending and strength characteristics.

Applicants refer to their arguments and the accompanying declaration of Ikenishi from the previous amendment in support of the patentability of the claim.

Finally, Applicants believe that they have addressed the suggestions made by the Examiner at pages 12-15 of the Office Action by rephrasing claim 1 and directing it to a substrate.

Based on the foregoing, the claim as amended now should be allowable.

Claims 5, 11-14 and 19-21

These rejected claims would be patentable for reasons given for amended parent claim 1, because of their dependency from claim 1.

Claims 6-10, 15-18 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto et al and Hayashi et al taken with Maeda et al as applied to claims 1, 5, 11-14 and 19-21 above, and further in view of either Miyamoto et al (US 2002/0110706) — newly applied. This rejection is traversed for at least the following reasons.

First, as to claim 16, the rejection is moot in view of the cancellation of the claim.

Second, the remaining claims would be patentable for reasons given for amended parent claim 1, because of their dependency from claim 1. Miyamoto does not remedy the deficiencies of Hashimoto et al and Hayashi et al taken with Maeda et al with regard to the substrate and composition recited in amended claim 1.

Claims 5-15 and 17-22 with linking claim 1 are rejected under anticipated under 35 USC 102(e) or under 35 U.S.C. 103(a) as obvious over Ikenishi et al (US 2003/0109370). This rejection is traversed for at least the following reasons.

First, as to claim 16, the rejection is moot in view of the cancellation of the claim.

Second, the remaining claims would be patentable for reasons given for amended parent claim 1, or because of their dependency from amended claim 1.

Amended Claim 1

Applicants now have amended claim 1 so that it is directed to a substrate of an information recording medium comprising a disk that is “adapted to receive on a surface thereof plural layers including a recording layer and comprising a glass suitable for chemical

reinforcement,” where the glass has a specified composition, as disclosed in paragraph 0054 of the published application, that achieves highly desirable bending and strength characteristics.

Applicants also believe that they have addressed the suggestions made by the Examiner at pages 12-15 of the Office Action by rephrasing claim 1 and directing it to a substrate.

Applicants submit that the teachings in Ikenishi et al do not teach or suggest the composition, ranges, and ratios of components as now claimed.

Finally, if necessary, Applicants note that the Ikenishi et al reference is not Section 102(b) art. Thus, for a rejection based on Section 102(c), Ikenishi et al and may be overcome by the filing of a Declaration under Rule 132 asserting common inventorship. Further, for a rejection based on Section 103(a), Ikenishi et al would be overcome by asserting development of the claimed invention under common ownership of Ikenishi et al and the present invention, based upon the provisions of Section 103(c). Specifically, Applicants respectfully submit that the subject matter of Ikenishi et al and the claimed invention were, at the time the claimed invention was made, owned by the same person, Hoya Corporation.

Double patenting

Claims 5-15 and 17-22 with linking claim 1 rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-11 of U.S. Patent No. 6,818,576. This rejection is traversed for at least the following reasons.

The Examiner frames the rejection by stating that “U.S. Patent No. 6818576 claims a glass SiO_2 , Al_2O_3 , CaO , BaO , Na_2O and ZrO_2 content and no Li_2O . The specification defines the instant linking claim composition as the presence of Li_2O eliminated from the glass (Patent No. 6818576 where Li_2O is zero - col. 7 Ins 41-44 and col. 14 et seq. and shown in Examples 1-5, 7, 8, 11, 12-26, 32, 45 and 48).”

Applicants respectfully submit that amended claim 1 and the claims that depend from claim 1 are completely different from those in US Patent No. 6,818,576. Specifically, the recited compositions in the patent claims are different from those in amended claim 1, as are the proportions thereof, and totals. Accordingly, there is no basis for double patenting.

Conclusion

Claims 24-26, which have been pending in the application and have not been rejected in the outstanding Office Action, clearly are patentable.

Amended claim 1 and the other claims dependent therefrom also are patentable for the reasons given, particularly the Applicant's amendment to claim 1 consistent with the Examiner's comments in the Office Action and in the interview conducted on February 7, 2011.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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